

## Claims:

1. An aqueous dispersion having a pH value of between 3 and 7 containing 1 to 35 wt.% of a pyrogenically produced silicon-aluminium mixed oxide powder with a specific surface area of 5 to 400 m<sup>2</sup>/g, characterised in that

- the proportion of aluminium oxide in the powder is between 90 and 99.9 wt.% or between 0.01 and 10 wt.%,
- the surface of the powder comprises zones of aluminium oxide and silicon dioxide,
- the powder exhibits no signals for crystalline silicon dioxide in an X-ray diffractogram.

2. An aqueous dispersion according to claim 1, characterised in that the dispersion comprises 0.3-20 wt.% of an oxidising agent.

3. An aqueous dispersion according to claim 1 or 2, characterised in that it contains additives.

4. An aqueous dispersion according to claims 1 to 3, characterised in that, in addition to the silicon-aluminium mixed oxide powder, it contains at least a further metal oxide powder from the group comprising silicon dioxide, aluminium oxide, cerium oxide, zirconium oxide and titanium dioxide.

5. Use of the aqueous dispersion according to claims 1 to 4 for the chemical-mechanical polishing of conductive, metallic films.

6. Use of the aqueous dispersion according to claims 1 to 4 for the chemical-mechanical polishing of conductive, metallic films which are applied on an insulating barrier layer.